	Application No.	Applicant(s)
Notice of Allowability	09/840,961	TANAKA, KATSUYUKI
	Examiner	Art Unit	
	Wen-Tai Lin	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendment filed on 1/8/04 and telephone interview held on 2/14/05*.

2. ☒ The allowed claim(s) is/are *6, 10-18, 20-33 and 35-39, renumbered as 1-29*.

3. ☒ The drawings filed on *25 April 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some*   c) ☐ None of the:
       1. ☐ Certified copies of the priority documents have been received.
       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
       3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the
          International Bureau (PCT Rule 17.2(a)).
    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
       1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .
    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
       Paper No./Mail Date _____ .
    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)
1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____ .

EXAMINER'S AMENDMENT

1.   An examiner's Amendment to the record appears below. Should the changes

and/or additions be unacceptable, an amendment may be filed as provided by 37 C.F.R.

1.312. To ensure consideration of such an amendment, it MUST be submitted no later

than the payment of the Issue Fee.

2.   Authorization for the examiner's amendment was given in a telephone interview

with Mr.Blumenthal, reg. no.26257, on February 14, 2005.

3.   In the claims:

(i) Please cancel claims 7, 19 and 34.

(ii) Please replace claims 6, 10 and 25 with the following:

6. (Currently Amended) A network configuration data management system
comprising:

(a) a directory server including:

(a1) a current map tree for containing information for current network
configuration conditions organized into a directory tree format, and

(a2) a temporary map tree for containing differential information for a
future network configuration organized into a directory tree structure that represents a
difference resulting from any changes made to the current network configuration; and

(b) a network configuration information management apparatus including:

(b1) network configuration data control means that responds to a request from any external application for providing network configuration data management functions by performing operations on map data,

(b2) current map tree access means for accessing said current map tree within said directory server to retrieve appropriate information therefrom, and updating the retrieved information, and

(b3) temporary map tree access means for accessing said temporary map tree within said directory server to perform generating, modifying and deleting operations,

wherein a future network configuration information that represents the information expected to occur at any future time later than the current time may be generated by merging the information in said current map tree together with the information in said temporary map tree; and

wherein said network configuration information management apparatus includes a network configuration data store section for storing the directory tree information temporarily;

wherein said network configuration data control means is configured for:

accessing said current map tree containing the current network configuration information through said current map tree access means, and retrieving the information for the component as identified by an entry located under the current map entry from said current map tree;

temporarily storing the information thus retrieved in said network configuration data store section;

accessing said temporary map tree through said temporary map tree access means; and

searching said temporary map tree for any temporary map entry information applicable to the time earlier than the time specified by said external application;

wherein, if it is found that no such temporary map entry is available, meaning that the information retrieved from the current map entry is determined to be a search result,

returning the current map entry information to said external application as it remains
unchanged, and if it is found that one or more such temporary map entries are
available, collects every entry information located under the temporary map entry and
specified by said external application that has been retrieved from said temporary map
tree through said temporary map tree access means;, and

wherein said network configuration data control means is further configured for;

merging the entry information under the temporary map entry and
collected together with the current map tree previously stored in said network
configuration data store means; and

collecting all temporary map entries and merging them to update the entry
information under the current map entry and stored in said network configuration data
store section, and returning the updated version of the information to said external
application;

wherein said directory server includes a log map tree for storing the log
information that occurred in the past for a particular component;

wherein said network configuration information management apparatus includes
log map tree access means that allows said apparatus to access the log map tree; and

wherein, if the network configuration information that may be applicable to any
past time is requested, said network configuration data control means responds to that
request for causing said map tree access means and said log map tree access means
to accessing said current map tree and said log map tree within said directory server,
respectively, and retrieve the information from the respective map trees, and for
obtaining the past network configuration information by merging the information
retrieved from the current map tree together with the log map information that has been
setup up to said any past time.

10. (Currently Amended) In a system comprising a network configuration
information management apparatus, the network configuration information management
apparatus including:

(a) a directory server for storing a current map tree that contains information for current network configuration conditions organized into a directory tree structure and a temporary map tree that contains future configuration information, organized into a directory tree structure, that represents a difference from the current network configuration resulting from any changes made to the current network configuration;

(b) network configuration data control means for providing the network configuration data management functions by performing operations on map data in response to a request from any external application;

(c) current map tree access means for accessing the current map tree stored in said directory server to retrieve the information therefrom, and updating the retrieved information; and

(d) a temporary map tree access means for accessing the temporary map tree stored in said directory server, and generating, modifying and updating the information therein, a network configuration data management method comprising the steps of:

(A1) receiving, at said network configuration data control means, a request for modifying configuration data from any external application, said network configuration data control means responding to the request to request that the temporary map tree access means generate a temporary map entry as a root for the temporary map tree, and said temporary map tree access means responding to the request from said network configuration data control means to access said directory server for generating the temporary map entry;

(A2) sorting data instructed in the request, termed as "request data", for modifying the configuration data for each entry, in the order of the directory tree hierarchy beginning with a top level toward a bottom level;

(A3) retrieving said sorted data in the request sequentially, and checking them to determine whether what is requested is to add, modify, or delete an entry;

(A4) dividing processing steps into add, modify and delete, based on the results of the checking,

(A5) if it is determined that an entry is to be added, generating an entry designated as Add in the temporary map tree;

(A6) if it is determined that any existing entry is to be modified, generating an entry designated as Modify in the temporary map tree; and

(A7) if it is determined that the information for any existing entry is to be deleted, generating an entry designated as Delete in the temporary map tree;

wherein said directory server further includes a log map tree for storing log information for components that occurred in the past;

wherein said network configuration information management apparatus further includes a log map tree access means through which it has access to said log map tree; and

wherein, in response to the request for the network configuration information that is applicable to any particular time in the past, said network configuration data control means obtains the information in the current map tree stored in said directory server as well as the information in said log map tree, through said current map tree access means and said log map tree access means, respectively, and then produces a new version of the network configuration information as requested by merging the information in said map tree together with the information in said log map tree that has been setup up to said particular past time.

25. (Currently Amended) A computer program for being executed on a computer including a network configuration information management apparatus that comprises:

a directory server storing:

a current map tree that contains information for the current network condition organized into a directory tree structure, and

a temporary map tree that contains information for the future network configuration, organized into a directory tree structure, that represents a difference from a current network configuration resulting from changes made to the current network configuration;

a network configuration data control means responsive to a request received from any external application for performing operations on the map data and providing network configuration data management functions;

a current map tree access means for retrieving and updating the information from the current map tree stored in said directory server; and

a temporary map tree access means for performing the generating, modifying, and deleting operations for the temporary map tree stored in said directory server, the functional and processing features of said network configuration data control means,

said computer program comprising the steps of:

(A1) receiving a request for change in the configuration from an external application, and requesting that the temporary map tree access means access said directory server to generate a temporary map entry as a root of the temporary map tree;

(A2) sorting the data instructed in the configuration change request, in the order of the directory tree hierarchy beginning with a top level toward a bottom level;

(A3) retrieving the sorted data in the request sequentially, and determining from the retrieved data that it requests that an entry is to be added, modified, or deleted;

(A4) based on the result determined in step (A3), dividing the processing steps into Add, Modify and Delete, otherwise treating the request as an error;

(A5) if it is determined that Add is requested, generating an entry designated as Add in the temporary map tree;

(A6) if it is determined that Modify is requested, generating an entry designated as Modify in the temporary map tree; and

(A7) if it is determined that Delete is requested, generating an entry designated as Delete in the temporary map tree;

wherein said directory server further includes a log map tree for storing log information for components that occurred in the past;

wherein said network configuration information management apparatus further includes a log map tree access means through which it has access to said log map tree, and

wherein, in response to the request for the network configuration information that is applicable to any particular time in the past, said network configuration data control means obtains the information in the current map tree stored in said directory server and the information in said log map tree through said current map tree access means

and said log map tree access means, respectively, and obtains the network configuration information as requested by merging the information in said map tree together with the information in said log map tree that has been setup up to said particular past time.

4.   Pursuant to MPEP 606.01, the title has been changed to read:

-- SYSTEM AND METHOD FOR DERIVING FUTURE NETWORK CONFIGURATION DATA FROM THE CURRENT AND PREVIOUS NETWORK CONFIGURATION DATA -

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday (8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

        (703)872-9306 for official communications; and

        (571)273-3969 for status inquires draft communication.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Tai Lin

February 23, 2005